

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: §  
Prathyusha K. Salla, et al. § Confirmation No.: 9778  
§  
Serial No.: 10/723,716 § Group Art Unit: 3768  
§  
Filed: November 26, 2003 § Examiner: Weatherby, Ellsworth  
§  
For: METHOD AND SYSTEM FOR § Atty. Docket: GEMS:0262/YOD/RAR/LIU  
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April 17, 2008	_____ Date	/John Rariden/ John M. Rariden
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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

In response to the Final Office Action mailed on October 18, 2007, and the Advisory Action received via facsimile on April 14, 2008, Appellants respectfully submit this Pre-Appeal Brief Request for Review. This Request is being filed concurrently with a Notice of Appeal regarding the Examiner's improper rejection of claims 1-40 of the present application. In view of the legal and factual errors set forth below, Appellants respectfully requests the Panel to withdraw all outstanding rejections.

**Rejections under 35 U.S.C. §102**

Appellants respectfully traverse the Examiner's final rejection of claims 1-4, 6 and 15-18 under 35 U.S.C. §102(b) as being anticipated by Pflaum (U.S. Patent No. 6,324,254) and claims 25, 37, 38, and 40 under 35 U.S.C. §102(b) as being anticipated by Liu (U.S. Patent No. 6,233,478). Of these, claims 1, 15, 25, 37, 38, and 40 are independent. Thus, the subsequent discussion will focus on the rejection of independent claims 1, 15, 25, 37, 38 and 40.

**Independent Claims 1 and 15**

Independent claims 1 and 15 each recite "acquiring motion data for two or more organs" (emphasis added). Appellants reiterate once again that Pflaum does not teach or suggest this

recited feature. In contrast, Pflaum discloses an imaging method based on using a single sensor for acquiring motion data for a *single* organ, rather than “two or more organs,” as would be required to anticipate claims 1 and 15. Specifically, Pflaum discloses a “motion detection system … by means of which the vessel motion or the motion of an organ … can be acquired.” Pflaum, col. 3, lines 60-63 (emphasis added).

The Examiner’s rejection appears to be based on the mistaken assumption that a “vessel” is allegedly an organ, and thus “vessel motion” and “organ motion,” as disclosed in Pflaum, constitutes motions of two or more organs. In the Advisory Action, the Examiner maintained this position, asserting that “the heart and [its] vessels make up *two unique organs* in the cardio-vascular system.” Advisory Action, p. 2. (Emphasis added). The Examiner reasoned that a vessel and a heart are separate “organs” because they each have unique specialized structures and cells for performing a specialized function. *See id.* Appellants respectfully disagree. It is well-established legal precedent that pending claims must be interpreted in a manner that is both reasonable in view of the specification and also consistent with that which a person skilled in the art would reach. *See In re Prater*, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969); *In re Cortright*, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); M.P.E.P. §2111.

With the foregoing in mind, Appellants note that motion of “two or more organs,” as disclosed in the specification, clearly refers to the “motion of internal organs, such as the heart, lungs, diaphragm, stomach, and so forth.” Specification, page 1, lines 15-18. Therefore, although Appellants do not dispute that vessels perform important functions in the human body, Appellants reiterate that the Examiner’s interpretation of “organ” as essentially being any organic structure comprising cells in the human body, is *overly broad*, and thus unreasonable when considered in view of the specification.

Additionally, the Examiner’s proposed interpretation of a “vessel” as being analogous to an “organ” is wholly inconsistent with the teachings of Pflaum upon which the Examiner has based this interpretation. As discussed in the previous Response, Pflaum clearly distinguishes between vessels and organs. Indeed, the separate and distinct use of the terms “vessel” and “organ” clearly preclude an interpretation suggesting that these terms are analogous or interchangeable. As such, Appellants submit to the Panel that the Examiner has provided no reasonable basis for equating a

“vessel” with an “organ,” as Pflaum clearly distinguishes between vessels and organs, and that such an interpretation is not only unreasonable in view of the specification *and* the cited reference, but also inconsistent with the interpretation one skilled in the art would reach. As such, this interpretation cannot be considered reasonable. Therefore, Appellants reiterate that Pflaum fails to teach or suggest acquiring motion data for two or more organs.

Still further, referring generally to the arguments presented on pages 2-4 of the previous Response, even assuming hypothetically that the Examiner’s interpretation of “vessel” as constituting an “organ” has any reasonable basis, Pflaum appears to *only* disclose that *either* vessel motion or organ motion is acquired. Thus, Pflaum still fails to disclose that the motions of *both* (e.g., two or more) the vessel and the organ are acquired *at the same time*. For at least these reasons, the rejections of claims 1 and 15 and their dependent claims cannot be sustained.

*Independent Claims 25 and 37*

Each of independent claims 25 and 37 generally recites an imaging system for acquiring motion data of “two or more organs.” In the Final Office Action, the Examiner’s reasoned that an “electrocardiograph for monitoring a beating heart,” as disclosed by Liu, “is indicative of the motion of two or more organs because a beating heart inherently causes motion of the vessels.” Final Office Action, pp. 2-3. (Emphasis added). In other words, the Examiner’s rejection of claims 25 and 37 under Liu is based on the *same* erroneous assumption that “vessel” and “organ” are analogous terms, as discussed above with regard to the rejection of claims 1 and 15. Therefore, for at least those above-discussed reasons, Appellants reiterate that Liu fails to disclose acquiring motion data for two or more organs and, therefore, the rejection of claims 25 and 37 and their dependent claims cannot be sustained.

*Independent Claims 38 and 40*

Independent claims 38 and 40, which are both directed towards imaging systems, each recite “at least two of one or more types of electrical sensors or one or more types of non-electrical sensors” (emphasis added). In other words, these claims require *at least two types* of sensors, which may be two or more types of electrical sensors, two or more types of non-electrical sensors, or at least one type of electrical and at least one type non-electrical sensor.

As discussed in the previous Response, Liu only discloses a single sensor, namely an electrocardiograph. Thus, Liu fails to provide the requisite “at least two” types of sensors, as would be required to anticipate claims 38 or 40. In the Advisory Action, the Examiner offered that an ECG could include multiple electrodes/leads (e.g., disposed on a patient’s skin), and asserted that each of these leads constitutes a separate sensor. *See* Advisory Action, p. 2. Appellants respectfully disagree. In particular, the separate leads/electrodes described by the Examiner together form a single ECG device, i.e., the sensor, which generates a particular sensory output, an electrocardiogram. For example, as described in the Liu reference, an electrocardiograph produces a single sensory output, i.e., an electrocardiogram, which is indicative of motion one organ, the heart. Liu, Figs. 11-16; col. 5, lines 27-29, col. 10, lines 21-24. We see no basis for believing that one of ordinary skill in the art, upon reviewing the Liu reference, would believe that multiple types of sensors were disclosed merely because a single electrocardiograph device might include multiple patient contacting leads or electrodes. Further, even if one were to reach such a conclusion, the various leads/electrodes of an electrocardiograph device are still the same type of sensor, i.e., an ECG lead. Thus, even if the Examiner’s construction were reasonable, the Liu reference still does not disclose multiple types of sensors, as recited in independent claims 38 and 40.

### **Claim Rejections under 35 U.S.C. §103**

Appellants note that all of the remaining claims not rejected under 35 U.S.C. §102(b) were rejected under 35 U.S.C. §103(a) in view of either Pflaum or Liu, combined with additional secondary references. As will be discussed herein, these secondary references fail to obviate the deficiencies of Pflaum or Liu. Specifically, the following discussion will focus on the maintained Section 103 rejections of independent claims 8, 20, 31, and 39.

#### **Independent Claims 8 and 20**

Independent claims 8 and 20, which were rejected in view of Pflaum and Li (U.S. Patent No. 6,836,529), recite acquiring motion data for one or more organs using “at least two of one or more types of electrical sensors and one or more types of non-electrical sensors.” In other words, claims 8 and 20 require at least one electrical and one non-electrical sensor. As discussed above, Pflaum only discloses a single sensor for acquiring motion from a single organ. Further, as discussed in the previous Response, although Li does appear to discuss multiple types of sensors, these sensors are only described in the context of being alternatives to using an EKG sensor, which appears to be

the preferred embodiment in Li. In other words, it does not appear that Li contemplates using two different types of sensors simultaneously, as would be required to render claims 8 or 20 obvious. As such, Pflaum and Li, alone or in combination, fail to establish a *prima facie* case of obviousness and, therefore, the rejection of claims 8 and 20 and their dependent claims cannot be sustained.

**Independent Claims 31 and 39**

Independent claim 31 was rejected in view of Liu and Schlossbauer (U.S. Pub. No. 2002/0091314), and independent claim 39 was rejected in view of Liu and Ustuner (U.S. Pub. No. 2004/0006266). Appellants note that each of claims 31 and 39 recited acquiring motion data for “two or more organs.” However, as discussed above, Liu fails to disclose acquiring motion data for two or more organs. Specifically, Appellants reiterate that the Examiner’s assertion that Liu teaches acquiring motion for a “vessel” and an “organ” does not constitute “two or more organs,” as these terms are not reasonably interchangeable nor are they analogous. Further, referring to the remarks set forth on pages 13-14 of the previous Response, neither Schlossbauer nor Ustuner obviate the deficiencies of Liu with regard to claims 31 and 39, respectively. Therefore, Appellants respectfully submit that the combination of Liu with either of these secondary references fails to establish a *prima facie* case of obviousness and, therefore, the rejection of claims 31 and 39 cannot be sustained.

**Conclusion**

In view of the above remarks, Appellants respectfully request that the Panel instruct the Examiner to withdraw the outstanding rejections under 35 U.S.C. §§102 and 103 and allow the pending claims.

Respectfully submitted,

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